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SECTION 01110

SUMMARY OF WORK

PART 1 GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

1.1.1 PROJECT DESCRIPTIONS

The work includes Base Bid Items including incidental related work:

- a. Removal and disposal of approximately 550 linear foot of existing ornamental steel fence.
- b. Provide a new ornamental steel fence.

Optional Bid Item #1, including incidental related work:

- a. Removal and disposal of an existing chain link cantilever sliding gate and operator.
- b. Provide a new ornamental steel cantilever sliding gate and operator.

Optional Bid Item #2, including incidental related work:

- a. Removal and disposal of approximately 330 linear feet of existing chain link fence.
- b. Provide a new chain link fence.

1.1.1.1 Location

The work shall be located at the U.S. Coast Guard Group Portland, in South Portland, Maine. Visits to the project site shall be coordinated and arranged with the Group Engineer Officer, CWO Young, at (207) 767-0350. Unscheduled site visits will not be allowed.

1.2 EXISTING WORK

In addition to "FAR 52.236-9, Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements":

- a. Remove or alter existing work in such a manner as to prevent injury or damage to any portions of the existing work which remain.
- b. Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as approved by the Contracting Officer. At the completion of operations, existing work shall be in a condition equal to or better than that which existed before new work started.

1.3 LOCATION OF UNDERGROUND FACILITIES

Verify the elevations of existing piping, utilities, and any type of underground obstruction in locations to be traversed by work to be

installed.

1.4 SUPERVISION

Have at least one qualified supervisor capable of reading, writing, and conversing fluently in the English language on the job site during working hours.

1.5 PRECONSTRUCTION CONFERENCE

After award of the contract but prior to commencement of any work at the site, meet with the Contracting Officer to discuss and develop a mutual understanding relative to the administration of the value engineering and safety program, preparation of the schedule prices, shop drawings, and other submittals, scheduling programming, and prosecution of the work. Major subcontractors who will engage in the work shall also attend. Contractor's plan for maintaining base security during construction shall also be discussed.

1.6 INSPECTION

The Contractor shall keep the Contracting Officer or duly appointed representative fully informed of contract operations and plans so that a representative may arrange to be present at various times that work is being performed.

1.6.1 Contractor's Daily Log

The Contractor shall complete the USCG Daily Log form at the end of each working day and deliver it to the Government Inspector. The Government Inspector will attest to its accuracy by initialing the form and forwarding that form to CEU Providence. The form will be provided to the Contractor by the Contracting Officer's Representative.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

SECTION 01140

WORK RESTRICTIONS

PART 1 GENERAL

1.1 SPECIAL SCHEDULING REQUIREMENTS

- a. Group Portland will remain in operation during the entire construction period. The Contractor shall conduct his operations so as to cause the least possible interference with normal operations of the activity.
- b. Permission to interrupt any Activity roads, railroads, and/or utility service shall be requested in writing a minimum of 15 calendar days prior to the desired date of interruption.

1.2 CONTRACTOR ACCESS AND USE OF PREMISES

1.2.1 Activity Regulations

Ensure that Contractor personnel employed on the Activity become familiar with and obey Activity regulations including safety, fire, traffic and security regulations. Keep within the limits of the work and avenues of ingress and egress. Do not enter any restricted areas unless required to do so and until cleared for such entry. The Contractor's equipment shall be conspicuously marked for identification.

1.2.2 Working Hours

Regular working hours shall consist of an 8 1/2 hour period to begin no later than 8:00 a.m., Monday through Friday, excluding Government holidays.

1.2.3 Work Outside Regular Hours

Work outside regular working hours requires Contracting Officer approval. Make application 15 calendar days prior to such work to allow arrangements to be made by the Government for inspecting the work in progress, giving the specific dates, hours, location, type of work to be performed, contract number and project title. Based on the justification provided, the Contracting Officer may approve work outside regular hours.

1.3 SUBMITTALS

Submit the following in accordance with Section 01330, "Submittal Procedures".

SD-01 Preconstruction Submittals

Base Security Plan

1.4 SECURITY REQUIREMENTS

1.4.1 Parking

Prohibited on any piers and waterfront areas. Due to limited parking space at the site, the Contractor shall organize a meeting off-site and carpool

to Group Portland. One car will be authorized on site for every three people employed by the Contractor.

1.4.2 Base Security Plan

Contractor shall submit a plan to maintain 100% enclosure of the base perimeter during construction. At the contractor's option, the plan may include temporary construction of security fences, or deliberate scheduling of demolition work and new construction, or other approved methods to maintain security.

Any temporary fencing used shall measure no less than 7 feet above grade when installed.

One approved plan would require contractor to pour new fence post footings approximately 2 feet inside the existing fence line, allow concrete to set at least 72 hours, and then begin demolition of existing fence. Contractor would be required each day to match the length of fence demolished with the length of fence constructed, thereby limiting the open perimeter that would require additional security each night.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

SECTION 01320

CONSTRUCTION SCHEDULE/SCHEDULE OF VALUES

PART 1 GENERAL

1.1 SUBMITTALS

Submit the following in accordance with Section 01330, "Submittal Procedures."

SD-01 Preconstruction Submittals

Construction Schedule/Schedule of Values

1.2 CONSTRUCTION SCHEDULE/SCHEDULE OF VALUES

At the Pre-Construction Conference, submit a Construction Schedule and Schedule of Values in accordance with FAR Clause 52.236.15. The Schedule of Values shall be based on the actual breakdown of the bid price. The cost of insurance shall not be listed as a separate item but included as part of each item of work. The actual cost of bonds may be paid as the first progress payment when a receipt from the bonding company is presented to the Contracting Officer. In addition, keep the Government Inspector informed daily of the expected delivery dates for major pieces of equipment and materials.

Construction Schedule and Schedule of Values shall be incorporated into one form which clearly indicates the start and completion dates and unit value of all major work components. The sample form provided in this section may be used. Optional forms may be used provided they include at a minimum all information conveyed on the sample form.

Construction Schedule/Schedule of Values form shall incorporate at a minimum the following activities:

- a. Bonds
- b. Mobilization
- c. Demobilization
- d. Pre-Construction Submittals
- e. Work Activities
- f. In-Progress Submittals
- g. Final Government Inspection
- h. Close-Out Submittals; i.e. Testing Balancing Reports,
Warranties, Operation and Maintenance Manuals, Posted
Instructions
- i. As-Built Drawings
- j. Factors which Constitute Potential Interruptions to Station

Operations

Pre-Construction Submittals are those activities which encompass the obtaining, submission, review and approval of submittals necessary prior to the start of the related site work. Contractor shall annotate all such activities into the progress schedule with their forecasted time periods. These activity periods shall not be exclusive of the contract performance period. No site work shall commence until the respective submittals have been approved.

The value of all major work components within the project shall be identified on the Construction Schedule/Schedule of Values on a unit quantity and unit cost basis, e.g. number of squares and cost per square of roofing, number of lineal feet and cost per lineal foot of conduit, number of panels and cost per panel etc. Lump sum items shall only be paid for when 100% complete.

The Construction Schedule/Schedule of Values as approved by the Government is not a substitute for quantities conveyed by the specification and drawings and those required for a complete job. Omissions and errors on the Construction Schedule/Schedule of Values are the responsibility of the Contractor.

Payments will not be made until the schedule of prices has been submitted to and approved by the Contracting Officer.

1.3 UPDATED SCHEDULES

Update the construction schedule and equipment delivery schedule when schedule has been revised. Reflect any changes occurring since the last update.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 PROGRESS UPDATES

3.1.1 Modifications

When a modification is issued by the Government, record the modification as the last activity of the Construction Schedule/Schedule of Values and include the value of the modification. Adjust the Schedule of Values to reflect the inclusion of the modification. Revise the Construction Schedule portion of the form to annotate the progress change. Enter all modifications in this manner in sequential order.

-- End of Section --

SECTION 01330

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 DEFINITIONS

1.1.1 Submittal

Shop drawings, product data, samples, and administrative submittals presented for review and approval. Contract Clauses "FAR 52.236-5, Material and Workmanship," paragraph (b) and "FAR 52.236-21, Specifications and Drawings for Construction," paragraphs (d), (e), and (f) apply to all "submittals."

1.1.2 Types of Submittals

All submittals are classified as indicated in paragraph "Submittal Descriptions (SD)". Submittals also are grouped as follows:

- a. Shop drawings: As used in this section, drawings, schedules, diagrams, and other data prepared specifically for this contract, by contractor or through contractor by way of subcontractor, manufacturer, supplier, distributor, or other lower tier contractor, to illustrate portion of work.
- b. Product data: Preprinted material such as illustrations, standard schedules, performance charts, instructions, brochures, diagrams, manufacturer's descriptive literature, catalog data, and other data to illustrate portion of work, but not prepared exclusively for this contract.
- c. Samples: Physical examples of products, materials, equipment, assemblies, or workmanship that are physically identical to portion of work, illustrating portion of work or establishing standards for evaluating appearance of finished work or both.
- d. Administrative submittals: Data presented for reviews and approval to ensure that administrative requirements of project are adequately met but not to ensure directly that work is in accordance with design concept and in compliance with contract documents.

1.1.3 Submittal Descriptions (SD)

SD-01 Preconstruction Submittals

Construction Progress Schedule
Submittal register
Schedule of values
Health and safety plan
Work plan
Quality control plan
Environmental protection plan

SD-02 Shop Drawings

Drawings, diagrams and schedules specifically prepared to illustrate some portion of the work.

Diagrams and instructions from a manufacturer or fabricator for use in producing the product and as aids to the contractor for integrating the product or system into the project.

Drawings prepared by or for the contractor to show how multiple systems and interdisciplinary work will be coordinated.

SD-03 Product Data

Catalog cuts, illustrations, schedules, diagrams, performance charts, instructions and brochures illustrating size, physical appearance and other characteristics of materials or equipment for some portion of the work.

Samples of warranty language when the contract requires extended product warranties.

SD-07 Certificates

Statements signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements. Must be dated after award of project contract and clearly name the project.

Document required of Contractor, or of a supplier, installer or subcontractor through Contractor, the purpose of which is to further quality of orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel qualifications.

Confined space entry permits.

SD-10 Operation and Maintenance Data

Data intended to be incorporated in operations and maintenance manuals.

SD-11 Closeout Submittals

Documentation to record compliance with technical or administrative requirements or to establish an administrative mechanism.

As-built drawings

Special warranties

Posted operating instructions

Training plan

1.1.4 Approving Authority

Person authorized to approve submittal.

1.1.5 Work

As used in this section, on- and off-site construction required by contract documents, including labor necessary to produce construction and materials,

products, equipment, and systems incorporated or to be incorporated in such construction.

1.2 SUBMITTALS

Submit the following in accordance with the requirements of this section.

SD-01 Preconstruction Submittals

Submittal register

1.3 USE OF SUBMITTAL REGISTER

Prepare and maintain submittal register, as the work progresses. Do not change data in columns (c), (d), (e), and (f) as delivered by government.

1.3.1 Submittal Register

Submit submittal register. Do not change data in columns (c), (d), (e), and (f) as delivered by the government. Verify that all submittals required for project are listed and add missing submittals. Complete the following on the register:

Column (a) Activity Number: Activity number from the project schedule.

Column (b) Transmittal Number: Contractor assigned list of consecutive numbers.

Column (g) Contractor Submit Date: Scheduled date for approving authority to receive submittals.

Column (h) Contractor Approval Date: Date contractor needs approval of submittal.

Column (i) Contractor Material: Date that contractor needs material delivered to contractor control.

1.4 PROCEDURES FOR SUBMITTALS

1.4.1 Reviewing, Certifying, Approving Authority

Government organization shall be responsible for reviewing and certifying that submittals are in compliance with contract requirements. Approving authority on submittals is the Project Manager unless otherwise specified for specific submittal.

1.4.2 Constraints

- a. Submittals listed or specified in this contract shall conform to provisions of this section, unless explicitly stated otherwise.
- b. Submittals shall be complete for each definable feature of work; components of definable feature interrelated as a system shall be submitted at same time.
- c. When acceptability of a submittal is dependent on conditions, items, or materials included in separate subsequent submittals, submittal will be returned without review.

- d. Approval of a separate material, product, or component does not imply approval of assembly in which item functions.

1.4.3 Scheduling

- a. Coordinate scheduling, sequencing, preparing and processing of submittals with performance of work so that work will not be delayed by submittal processing. Allow for potential requirements to resubmit.
- b. Except as specified otherwise, allow review period, beginning with receipt by approving authority, that includes at least 10 working days. Period of review for each resubmittal is the same as for initial submittal.

1.4.4 Variations

Variations from contract requirements require Government approval pursuant to contract Clause entitled "FAR 52.236-21, Specifications and Drawings for Construction" and will be considered where advantageous to government.

1.4.4.1 Considering Variations

Discussion with contracting officer prior to submission, will help ensure functional and quality requirements are met and minimize rejections and resubmittals. When contemplating a variation which results in lower cost, consider submission of the variation as a Value Engineering Change Proposal (VECP).

1.4.4.2 Proposing Variations

When proposing variation, deliver written request to the contracting officer, with documentation of the nature and features of the variation and why the variation is desirable and beneficial to government. If lower cost is a benefit, also include an estimate of the cost saving. In addition to documentation required for variation, include the submittals required for the item. Clearly mark the proposed variation in all documentation.

1.4.4.3 Warranting That Variation Are Compatible

When delivering a variation for approval, contractor warrants that this contract has been reviewed to establish that the variation, if incorporated, will be compatible with other elements of work.

1.4.4.4 Review Schedule Is Modified

In addition to normal submittal review period, a period of 5 working days will be allowed for consideration by the Government of submittals with variations.

1.4.5 Contractor's Responsibilities

- a. Determine and verify field measurements, materials, field construction criteria; review each submittal; and check and coordinate each submittal with requirements of the work and contract documents.
- b. Transmit submittals to Contracting Officer in accordance with schedule on approved Submittal Register, and to prevent delays in

the work, delays to government, or delays to separate contractors.

- c. Advise contracting officer of variation, as required by paragraph entitled "Variations."
- d. Correct and resubmit submittal as directed by approving authority. When resubmitting disapproved transmittals or transmittals noted for resubmittal, the contractor shall provide copy of that previously submitted transmittal including all reviewer comments for use by approving authority. Direct specific attention in writing or on resubmitted submittal, to revisions not requested by approving authority on previous submissions.
- e. Furnish additional copies of submittal when requested by contracting officer, to a limit of 20 copies per submittal.
- f. Complete work which must be accomplished as basis of a submittal in time to allow submittal to occur as scheduled.
- g. Ensure no work has begun until submittals for that work have been returned as "approved," except to the extent that a portion of work must be accomplished as basis of submittal.

1.4.6 Government Responsibilities

- a. Note date on which submittal was received from contractor on each Contract Item Approval Request Form.
- b. Review each submittal; and check and coordinate each submittal with requirements of work and contract documents.
- c. Review submittals for conformance with project design concepts and compliance with contract documents.
- d. Ensure that material is clearly legible.
- e. Review submittals for approval within scheduling period specified and only for conformance with project design concepts and compliance with contract documents.
- f. Identify returned submittals with one of the actions defined in paragraph entitled "Actions Possible" and with markings appropriate for action indicated.

1.4.7 Actions Possible

Submittals will be returned with one of the following notations:

- a. Submittals marked "approved" "approved as submitted" authorize contractor to proceed with work covered.
- b. Submittals marked "approved" "see below" authorize contractor to proceed with work as noted provided contractor takes no exception to the notations.
- c. Submittals marked "disapproved" indicate submittal is incomplete or does not comply with design concept or requirements of the contract documents and shall be resubmitted with appropriate changes. No work shall proceed for this item until resubmittal is

approved.

1.5 FORMAT OF SUBMITTALS

1.5.1 Transmittal Form

Transmit each submittal, except sample installations and sample panels, to office of approving authority. Transmit submittals with transmittal form prescribed by contracting officer and standard for project. The transmittal form shall identify contractor, indicate date of submittal, and include information prescribed by transmittal form and required in paragraph entitled "Identifying Submittals." Process transmittal forms to record actions regarding sample panels and sample installations.

1.5.2 Identifying Submittals

Identify submittals, except sample panel and sample installation, with the following information permanently adhered to or noted on each separate component of each submittal and noted on transmittal form. Mark each copy of each submittal identically, with the following:

- a. Project title and location.
- b. Construction contract number.
- c. Section number of the specification section by which submittal is required.
- d. Submittal description (SD) number of each component of submittal.
- e. When a resubmission, alphabetic suffix on submittal description, for example, SD-10A, to indicate resubmission.
- f. Name, address, and telephone number of subcontractor, supplier, manufacturer and any other second tier contractor associated with submittal.
- g. Product identification and location in project.

1.5.3 Format for Product Data

- a. Present product data submittals for each section as a complete, bound volume. Include table of contents, listing page and catalog item numbers for product data.
- b. Indicate, by prominent notation, each product which is being submitted; indicate specification section number and paragraph number to which it pertains.
- c. Supplement product data with material prepared for project to satisfy submittal requirements for which product data does not exist. Identify this material as developed specifically for project.

1.5.4 Format for Shop Drawings

- a. Shop drawings shall not be less than 8 1/2 by 11 inches nor more than 30 by 42 inches.

- b. Present 8 1/2 by 11 inches sized shop drawings as part of the bound volume for submittals required by section. Present larger drawings in sets.
- c. Include on each drawing the drawing title, number, date, and revision numbers and dates, in addition to information required in paragraph entitled "Identifying Submittals."
- d. Dimension drawings, except diagrams and schematic drawings; prepare drawings demonstrating interface with other trades to scale. Shop drawing dimensions shall be the same unit of measure as indicated on the contract drawings. Identify materials and products for work shown.

1.5.5 Format of Samples

- a. Furnish samples in sizes below, unless otherwise specified or unless the manufacturer has prepackaged samples of approximately same size as specified:
 - (1) Sample of Equipment or Device: Full size.
 - (2) Sample of Materials Less Than 2 by 3 inches: Built up to 8 1/2 by 11 inches.
 - (3) Sample of Materials Exceeding 8 1/2 by 11 inches: Cut down to 8 1/2 by 11 inches and adequate to indicate color, texture, and material variations.
 - (4) Sample of Linear Devices or Materials: 10 inch length or length to be supplied, if less than 10 inches. Examples of linear devices or materials are conduit and handrails.
 - (5) Sample of Non-Solid Materials: Pint. Examples of non-solid materials are sand and paint.
 - (6) Color Selection Samples: 2 by 4 inches.
 - (7) Sample Panel: 4 by 4 feet.
 - (8) Sample Installation: 100 square feet.
- b. Samples Showing Range of Variation: Where variations are unavoidable due to nature of the materials, submit sets of samples of not less than three units showing extremes and middle of range.
- c. Reusable Samples: Incorporate returned samples into work only if so specified or indicated. Incorporated samples shall be in undamaged condition at time of use.
- d. Recording of Sample Installation: Note and preserve the notation of area constituting sample installation but remove notation at final clean up of project.
- e. When color, texture or pattern is specified by naming a particular manufacturer and style, include one sample of that manufacturer and style, for comparison.

1.5.6 Format of Administrative Submittals

- a. When submittal includes a document which is to be used in project or become part of project record, other than as a submittal, do not apply contractor's approval stamp to document, but to a separate sheet accompanying document.
- b. Operation and Maintenance Manual Data: Submit in accordance with Section 01781, "Operation and Maintenance Data." Include components required in that section and the various technical sections.

1.6 QUANTITY OF SUBMITTALS

1.6.1 Number of Copies of Submittals

- a. Submit four copies of submittals of product data.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION

REPLACE PERIMETER FENCE, GROUP PORTLAND

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	CLASSIFICATION GOVT OR A/E REVIEWER	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	APPROVING AUTHORITY				MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION		DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		01140	SD-01 Preconstruction Submittals Base Security Plan														
		01320	SD-01 Preconstruction Submittals Construction Schedule/Schedule of Values	1.2													
		01330	SD-01 Preconstruction Submittals Submittal register	1.3.1													
		01525	SD-07 Certificates Accident Prevention Plan (APP)	1.3.2.1													
		01575	SD-01 Preconstruction Submittals Environmental protection plan SD-11 Closeout Submittals Contractor Hazardous Material Inventory Log														
		01770	SD-10 Operation and Maintenance Data Product warranty list	1.4.1													
			SD-11 Closeout Submittals As-built drawings	1.3.1													
		02220N	SD-01 Preconstruction Submittals Demolition Procedures														
		02821N	SD-02 Shop Drawings Post Details Fence Section Location of corner and end posts														
			SD-03 Product Data														

SECTION 01500

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 TEMPORARY UTILITIES

1.1.1 Utilities for use by Contractor

Reasonable amounts of water and electrical utilities will be made available without charge. The Contractor will be responsible for making connections, and making disconnections. Under no circumstances will taps to base fire hydrants be allowed for obtaining domestic water.

1.2 WEATHER PROTECTION

When a warning of gale force winds is issued, take precautions to minimize danger to persons, and protect the work and nearby Government property. Precautions shall include, but are not limited to, removing loose materials, tools and equipment from exposed locations, and removing or securing scaffolding and other temporary work.

1.3 STORAGE AREAS

Contractor shall be responsible for security of his property. The Contract Clause entitled "FAR 52.236-10, Operations and Storage Areas" and the following apply:

1.3.1 Storage Size and Location

The open site available for storage shall be indicated during the pre-construction brief. The storage area shall be approximately 400 square feet.

1.4 SANITARY FACILITIES

The contractor will be allowed to use the sanitary facilities at Group Portland. Coordinate with the Group Engineer Officer for use of the specific facilities which will be made available.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 TEMPORARY PHYSICAL CONTROLS

3.1.1 Access Controls

3.1.1.1 Signs

Place warning signs and caution tape along the construction area perimeter designating the presence of construction hazards requiring unauthorized

persons to keep out. Signs must be placed on all sides of the project, with at least one sign every 300 feet. All points of entry shall have signs designating the construction site as a hard hat area when drop hazards exist.

-- End of Section --

SECTION 01525

SAFETY REQUIREMENTS

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

CORPS OF ENGINEERS (COE)

COE EM-385-1-1 (1996) Safety and Health Requirements Manual

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 241 (1996) Safeguarding Construction, Alteration, and Demolition Operations

1.2 SUBMITTALS

Submit the following in accordance with Section 01330, "Submittal Procedures."

SD-07 Certificates

Accident Prevention Plan (APP)

1.3 QUALITY ASSURANCE

1.3.1 New Employee Indoctrination

New employees will be informed of specific site hazards before they begin work. Documentation of this orientation shall be kept on file at the project site.

1.3.2 Certifications

1.3.2.1 Accident Prevention Plan (APP)

Submit the APP at least 15 calendar days prior to start of work at the job site, following Appendix A of COE EM-385-1-1. Make the APP site specific. Notice To Proceed will be given after Government finds the APP acceptable.

1.4 ACCIDENT PREVENTION PLAN (APP)

Prepare the APP in accordance with the required and advisory provisions of COE EM-385-1-1 including Appendix A, "Minimum Basic Outline for Preparation of Accident Prevention Plan," and as modified herein. Include the associated AHA and other specific plans, programs and procedures listed on Pages A-3 and A-4 of COE EM-385-1-1, some of which are listed below.

1.4.1 Contents of the Accident Prevention Plan

- a. Emergency response plan. Conform to COE EM-385-1-1, paragraph 01.E and include a map denoting the route to the nearest emergency care facility with emergency phone numbers. Contractor may be required to demonstrate emergency response.
- b. Hazardous Material Use. Provisions to deal with hazardous materials, pursuant to the Contract Clause "FAR 52.223-3, Hazardous Material Identification and Material Safety Data." and the following:
 - (1) Inventory of hazardous materials to be introduced to the site with estimated quantities.
 - (2) Plan for protecting personnel and property during the transport, storage and use of the materials.
 - (3) Emergency procedures for spill response and disposal, including a site map with approximate quantities on site at any given time. The site map will be attached to the inventory, showing where the hazardous substances are stored.
 - (4) Material Safety Data Sheets for inventoried materials not required in other section of this specification.
 - (5) Labeling system to identify contents on all containers on-site.
 - (6) Plan for communicating high health hazards to employees and adjacent occupants.
- c. Critical Lift Plan. Weight handling critical lift plans shall be prepared and signed in accordance with COE EM-385-1-1, paragraph 16.c.18.
- d. Severe Weather Plan. Procedures of ceasing on-site operations during lightning or upon reaching maximum allowed wind velocities.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 CONSTRUCTION

Comply with COE EM-385-1-1, NFPA 241, the accident prevention plan, and other related submittals and activity fire and safety regulations.

3.1.1 Excavation Safety

Prior to commencing excavation for fence post footers, identify the location and depth of all underground utilities in the work area through a utility locating service. Physically verify underground utility locations by hand digging using wood or fiberglass-handled tools when any construction work is expected to come within three feet of the underground system. Extreme care must be used when excavating near direct burial electrical underground cables.

3.1.2 Hazardous Material Exclusions

Notwithstanding any other hazardous material used in this contract, radioactive materials or instruments capable of producing ionizing/non-ionizing radiation as well as materials which contain asbestos, mercury or polychlorinated biphenyls, di-isocyanates, lead-based paint are prohibited. Exceptions to the use of any of the above excluded materials may be considered by Contracting Officer upon written request by Contractor.

3.1.3 Unforeseen Hazardous Material

The design should have identified materials such as PCB, lead paint, and friable and nonfriable asbestos. If material, not indicated, that may be hazardous to human health upon disturbance during construction operations is encountered, stop that portion of work and notify the Contracting Officer immediately. Within 14 calendar days the Government will determine if the material is hazardous. If material is not hazardous or poses no danger, the Government will direct the Contractor to proceed without change. If material is hazardous and handling of the material is necessary to accomplish the work, the Government will issue a modification pursuant to "FAR 52.243-4, Changes" and "FAR 52.236-2, Differing Site Conditions."

3.2 PERSONNEL PROTECTION

3.2.1 Hazardous Noise

Provide hazardous noise signs, and hearing protection, wherever equipment and work procedures produce sound-pressure levels greater than 85 dBA steady state or 140 dBA impulse, regardless of the duration of the exposure.

3.3 HOUSEKEEPING

3.3.1 Clean-up

All debris in work areas shall be cleaned up daily or more frequently as necessary. Construction debris may be temporarily located in an approved location, however garbage accumulation must be removed each day.

3.3.2 Dust Control

In addition to the dust control measures required elsewhere in the contract documents dry cutting of concrete shall be prohibited. Wet cutting must address control of water run off.

-- End of Section --

SECTION 01770

CLOSEOUT PROCEDURES

PART 1 GENERAL

1.1 SUBMITTALS

Submit the following in accordance with Section 01330, "Submittal Procedures."

SD-10 Operation and Maintenance Data

Product warranty list

SD-11 Closeout Submittals

As-built drawings

1.2 Hazardous Material Reporting

Submit hazardous material reporting information which includes actual quantities of hazardous materials stored and used during the project as specified in Section 01575, "Environmental Temporary Controls."

1.3 PROJECT RECORD DOCUMENTS

1.3.1 As-Built Drawings

Maintain at the jobsite one set of full-size contract drawings marked to show any deviations which have been made from the contract drawings. These drawings shall be available for review by the COntacting Officer at all times. Upon completion of the work, deliver the marked set of prints to the Contracting Officer. Requests for partial payments will not be approved if the marked prints are not current, and request for final payment will not be approved until the marked prints are delivered to the Contracting Officer.

1.4 PRODUCT WARRANTIES

1.4.1 Product Warranty List

Furnish to the Contracting Officer a bound and indexed notebook containing written warranties for products furnished under the contract, and prepare a complete listing of such products. The products list shall state the specification section applicable to the product, duration of the warranty therefor, start date of the warranty, ending date of the warranty, and the point of contact for fulfillment of the warranty. The warranty period shall begin on the same date as project acceptance and shall continue for the full product warranty period. Execute the full list and deliver to the Contracting Officer prior to final acceptance of the facility.

1.5 CLEANUP

Leave premises "broom clean." Remove waste and surplus materials, rubbish and construction facilities from the site.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

SECTION 02220N

SITE DEMOLITION

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI A10.6 (1990) Demolition Operations

1.2 GENERAL REQUIREMENTS

Do not begin demolition until authorization is received from the Contracting Officer. Remove rubbish and debris from the project site; do not allow accumulations. Demolish and remove materials containing, lead and chromium in accordance with Federal, State, and Local Regulations.

1.3 SUBMITTALS

Submit the following in accordance with Section 01330, "Submittal Procedures."

SD-01 Preconstruction Submittals

Demolition Procedures

1.4 REGULATORY AND SAFETY REQUIREMENTS

Comply with federal, state, and local hauling and disposal regulations. In addition to the requirements of the "Contract Clauses," safety requirements shall conform with ANSI A10.6.

1.5 DUST AND DEBRIS CONTROL

Prevent the spread of dust and debris and avoid the creation of a nuisance or hazard in the surrounding area. Sweep pavements as often as necessary to control the spread of debris that may result in foreign object damage potential to aircraft.

1.6 PROTECTION

1.6.1 Traffic Control Signs

Where pedestrian and driver safety is endangered in the area of removal work, use traffic barricades with flashing lights. Notify the Contracting Officer prior to beginning such work.

1.6.2 Existing Conditions

Protect existing work which is to remain in place, be reused, or remain the property of the Government. Repair items which are to remain and which are

damaged during performance of the work to their original condition, or replace with new.

1.6.2.1 Existing Unit Sign

The existing unit sign is located as indicated, and is fastened to the existing ornamental fence to be demolished. The Government will remove the sign prior to the commencement of fence demolition and will reinstall the sign after the completion of work. Notify the Group Engineer Officer at least 3 days prior to demolition work on this section of fence to allow sufficient time for sign removal.

1.6.2.2 Existing Environmental Conditions

The primer coating on the existing ornamental fence to be demolished under base bid was tested for lead and chromium in September of 1999. The test results are as follows:

<u>Location</u>	<u>Test</u>	<u>Concentration</u>
Fence Post	Lead Chromium	16000 mg/kg 2300 mg/kg
Fence Rail	Lead Chromium	25000 mg/kg 860 mg/kg
Fence Pickets	Lead Chromium	43000 mg/kg 1500 mg/kg

1.6.3 Existing Utilities

Protect electrical and mechanical services and utilities during demolition.

1.7 BURNING

Burning will not be permitted.

1.8 DEMOLITION PROCEDURES

Demolition plan shall include procedures for coordination with other work in progress, a detailed description of methods and equipment to be used for each operation and of the sequence of operations. When read together, the Demolition Procedures and the Base Security Plan, paragraph 1.3.2 of Section 01140, shall be compatible with each other.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 EXISTING FACILITIES TO BE REMOVED

3.1.1 Fences and Gates

Completely remove indicated existing fences and gates. Excavate and remove concrete footers corresponding to demolished fence and gate sections.

3.1.2 Landscape Patching

Where concrete footer removals leave holes in the landscape, patch and repair these holes to match adjacent landscape. Finished surfaces of patched area shall be flush with the adjacent landscape and shall match the existing landscape as closely as possible as to compaction of fill and variety of grass seed.

3.2 DISPOSITION OF MATERIAL

3.2.1 Title to Materials

All materials and equipment removed, shall become the property of the Contractor and shall be removed from Government property. The Government will not be responsible for the condition or loss of, or damage to, such property after contract award. Materials and equipment shall not be viewed by prospective purchasers or sold on the site.

3.3 CLEANUP

3.3.1 Debris and Rubbish

Remove and transport debris and rubbish in a manner that will prevent spillage on pavements, streets or adjacent areas. Clean up spillage from pavements, streets and adjacent areas. Conform to other applicable requirements under Section 01575, "Temporary Environmental Controls."

-- End of Section --

SECTION 02821N

CHAIN LINK FENCES

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 392	(1996) Zinc-Coated Steel Chain Link Fence Fabric
ASTM C 94	(1996) Ready-Mixed Concrete
ASTM F 567	(2000) Installation of Chain-Link Fence
ASTM F 626	(1996) Fence Fittings
ASTM F 1043	(1995) Strength and Protective Coatings on Metal Industrial Chain Link Fence Framework
ASTM F 1083	Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures

1.2 SUBMITTALS

Submit the following in accordance with Section 01330, "Submittal Procedures."

SD-02 Shop Drawings

Post Details

Fence Section

Location of corner and end posts

SD-03 Product Data

Chain-link fencing and accessories

1.3 DELIVERY, STORAGE, AND HANDLING

Deliver materials to site in an undamaged condition. Store materials off the ground to provide protection against oxidation caused by ground contact.

PART 2 PRODUCTS

2.1 MANUFACTURER

Products shall be manufactured by Anchor Fence/Master-Halco, Inc., or equal with respect to specifications for required size, gauge of metal parts, material quality, and material finish of the products. Chain link fence, including accessories, fittings, and fasteners, shall all be obtained from a single manufacturer.

2.2 CHAIN-LINK FENCING AND ACCESSORIES

2.2.1 Fabric

Zinc-coated wire per ASTM A 392, 1.2 oz/sf, 9-gage core wire size. Mesh size, 1 inch. Provide selvage knuckled at one selvage and twisted and barbed at the other. Height of fabric as indicated.

2.2.2 Framework

All framework, including terminal posts, line posts, and top and brace rails, shall be hot-dipped galvanized with a minimum average coating of 1.8 oz/sf. Framework shall be fabricated from round steel pipe, and shall meet the minimum requirements of Group 1A, Heavy Industrial Fence, per ASTM F 1043 and ASTM F 1083.

2.2.3 Fencing Accessories

Provide wire ties constructed of the same material as the fencing fabric. Provide accessories with galvanized coating as specified for chain-link fabric or framework. Materials shall be per manufacturer's instructions and ASTM F 626. Post caps shall be weathertight.

2.2.4 Concrete

ASTM C 94, using 3/4 inch maximum-size aggregate, and having minimum compressive strength of 3000 psi at 28 days.

PART 3 EXECUTION

3.1 SITE PREPARATION

3.1.1 Clearing and Grading

Clear fence line of trees, brush, and other obstacles to install fencing. Grade and compact fence line after obstacles are cleared.

3.1.2 Excavation

Excavate to dimensions indicated for corner and terminal posts, except in bedrock. If bedrock is encountered, continue excavation to depth indicated or 18 inches into bedrock, whichever is less, with a diameter in bedrock a minimum of 2 inches larger than outside diameter of post. Clear post holes of loose material. Dispose of waste material off of Government Property.

3.2 FENCE INSTALLATION

Install fence approximately as indicated. Install fence in accordance with fence manufacturer's written installation instructions and ASTM F 567, except as modified herein.

3.2.1 Post Spacing

Provide line posts spaced uniformly at 10 feet on center. Do not exceed 300 feet on straight runs between braced posts. Provide corner posts, with bracing in both directions, for changes in direction of 30 degrees or more, for abrupt changes in grade, and at each fence termination.

3.2.2 Post Setting

Set posts plumb. Allow concrete to cure a minimum of 72 hours before performing other work on posts.

3.2.2.1 Earth and Bedrock

Provide concrete bases of dimensions indicated. Compact concrete to eliminate voids, and finish to a dome shape.

3.2.3 Bracing

Brace corner and end, posts to nearest post with a horizontal brace rail used as a compression member, placed at mid-height of fence, and a diagonal truss rod.

3.2.4 Top and Brace Rails

Install top and brace rails before installing chain-link fabric. Pass top rail through intermediate post caps.

3.2.5 Bottom Tension Wires

Install bottom tension wires before installing chain-link fabric, and pull wires taut. Place bottom tension wires within 8 inches of respective fabric line.

3.2.6 Fabric

Pull fabric taut and secure fabric to top rail, brace rail, bottom wire, and tension bar close to both sides of each post and at maximum intervals of 24 inches on center. Secure tension bar to posts spaced 15 inches on center. Install fabric on opposite side of posts from area being secured. Install fabric so that bottom of fabric is 2 inches above ground level.

3.3 ACCESSORIES INSTALLATION

3.3.1 Post Caps

Design post caps to accommodate top rail. Post caps shall be weathertight. Install post caps as recommended by the manufacturer.

3.4 SECURITY

Perform related work in accordance with approved Base Security Plan to provide continuous security for facility. Schedule and fully coordinate work with Contracting Officer.

3.5 CLEANUP

Remove waste fencing materials and other debris from the station.
-- End of Section --

SECTION 02821A

ORNAMENTAL FENCING AND GATES

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 653	(2001) Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvanized) by the Hot-Dip Process
ASTM A 787	(2001) Electric-Resistance-Welded Metallic-Coated Carbon Steel Mechanical Tubing
ASTM A 1011	Steel, Sheet and Strip, Hot-Rolled, carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability
ASTM B 221	Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes

1.2 SUBMITTALS

SD-02 Shop Drawings

Ornamental Fence

Ornamental Picket Swing Gate

Cantilever Slide Gate

Cantilever Slide Gate Roller Details

SD-03 Product Data

Fence Components

Swing Gate

Cantilever Slide Gate

SD-10 Operation and Maintenance Data

Gate Operator

Four copies of operating and maintenance instructions, a minimum

of 2 weeks prior to field training. Operating instructions shall outline the step-by-step procedures required for system startup, operation, and shutdown. The instructions shall include the manufacturer's name, model number, service manual, parts list, and brief description of all equipment and their basic operating features. Maintenance instructions shall include routine maintenance procedures, possible breakdowns and repairs, and troubleshooting guide. The instructions shall include the general gate layout, equipment layout and simplified wiring and control diagrams of the system as installed.

SD-11 Closeout Submittals

Spare Section

1.3 APPROVAL OF COATED FENCE MATERIALS

Coated fence materials shall be thoroughly inspected for cracking, peeling, and conformance with the specifications by the Contracting Officer's Representative prior to installation. Any fence materials rejected by the Contracting Officer's Representative shall be replaced by the contractor with approved materials.

PART 2 PRODUCTS

2.1 MANUFACTURER

Products shall be manufactured by Monumental Iron works/Master-Halco, Inc., or equal with respect to specifications for required size, material quality, and material finish of the products. Ornamental fence and gates, including accessories, fittings, and fasteners, shall all be obtained from a single manufacturer.

2.2 ORNAMENTAL FENCE

2.2.1 Pickets

Galvanized square steel tubular members manufactured per ASTM A 787, having a 45,000 psi yield strength and G90 zinc coating, 0.90 oz/sq.ft. Attach each picket to each rail with 1/4 inch industrial drive rivets. Size #4. Wall thickness is 16 gauge. Picket dimension is 1 inch square. Picket tops shall be pressed steel point.

2.2.2 Rails

1-1/2 inch x 1-3/8 inch x 1-1/2 inch, 11 gauge-thick galvanized steel "U" channel per ASTM A 653 or ASTM A 1011, having a 50,000 psi yield strength and G90 zinc coating, 0.90 oz/sq.ft. Punch rails to receive pickets and rivets and attach rails to rail brackets with 2 each, 1/4 inch industrial drive rivets.

2.2.3 Posts

Galvanized square steel tubular members manufactured per ASTM A 787 having a 45,000 psi yield strength and G90 zinc coating, 0.90 oz./sq.ft. Zinc coating is inside and outside. Post size 3 inch square, 12 gauge wall thickness. Provide post top as indicated. Post top shall be weathertight and shall match design of standard style from Master-Halco ornamented iron fence product catalogue.

2.3 GATES

2.3.1 Ornamental Picket Swing Gate

2.3.1.1 Gate Frame

Fabricate ornamental picket swing gate using galvanized steel members, ASTM A 787, structural quality steel, 45,000 psi tensile strength, with galvanized G90 coating. Frame members welded using stainless steel welded to form rigid one-piece unit. Vertical uprights, 2 inch square, 13 gauge wall thickness.

2.3.1.2 Ornamental Pickets and Rails

Pickets and rails shall be of equal gauge, spacing as ornamental fence. Accessories and fasteners shall match ornamental fence.

2.3.1.3 Bracing

Provide diagonal adjustable length truss rod on gate to prevent sag.

2.3.1.4 Hardware Materials

Galvanized steel or malleable iron shapes with sizes as recommended by manufacturer.

2.3.1.5 Hinges

Structurally capable of supporting gate leaf and allow opening and closing without binding. Non-lift-off-type hinge design shall permit gate to swing 180 degrees.

2.3.1.6 Latch

Capable of retaining gate in closed position and have capabilities to accept padlock.

2.3.1.7 Keeper

Provide keeper for gate test. Gate keeper shall consist of mechanical device for securing free end of gate when in full open position.

2.3.1.8 Gate Posts

Square members, ASTM A 787, structural quality steel 45,000 psi tensile strength, with galvanized G90 coating; size 4 inch square, weighing 5.770 lbs/ft. Gate posts shall be terminal posts for ornamental fence.

2.3.2 Ornamental Picket Cantilever Slide Gates

2.3.2.1 Gate Frames

Fabricate cantilever slide gate top frame using 2 inch square aluminum members for uprights and top track, ASTM B 221, alloy and temper 6063-T6, weighing 1.88 lb./ft. Weld members together forming rigid one-piece frame integral with top track. Weld 2 top track/rails together forming a dual enclosed track. Bottom rail 2 inch x 4 inch aluminum member weighting 1.71 lb./ft. Gate may be shipped in 2 parts and field spliced with special

attachments as recommended by the manufacturer.

Gate Opening Size

Overall Gate Length

25 ft.

37'-3"

2.3.3 Ornamental Pickets and Rails

Pickets and rails shall be of equal gauge and spacing as ornamental fence. Accessories shall match ornamental fence. Fasteners shall be as recommended by the manufacturer.

2.3.4 Bracing

Provide diagonal adjustable length truss rods of 3/8 inch galvanized steel in each panel of gate frames.

2.3.5 Top Track/Rail

Track to withstand reaction load of 2,000 lb.

2.3.6 Truck Assembly

Ensure truck alignment in track. Mount trucks on post brackets using 7/8 inch diameter ball bolts with 1/2 inch shank. Mount brackets on each guide post with U-bolts as recommended by manufacturer. Design truck assembly to withstand same reaction load as track.

2.3.7 Gate Hangers, Latches, Brackets, Guide Assemblies and Stops

Malleable iron or steel, galvanized after fabrication. provide positive latch with provisions for padlocking.

2.3.8 Bottom Guide Wheel Assemblies

Each assembly shall consist of two 3 inch diameter rubber wheels, straddling bottom horizontal gate rail, allowing adjustment to maintain gate frame plumb and in proper alignment. Attach one assembly to each guide post.

2.3.9 Gate Posts

Galvanized steel 4 inch square with 3/8 inch wall thickness. Provide 1 latch post and 2 support posts for single slide gates and 4 support posts for double slide gates.

2.4 ACCESSORIES

Use accessories recommended by manufacturer.

2.5 FINISH

All pickets, rails, posts, gates, fittings and accessories of fencing and gates shall be polyester coated individually after drilling and layout, to ensure maximum corrosion protection. Coating of assembled sections is unacceptable. Pre-treat galvanized surface to ensure complete adhesion of the finish coat. Apply polyester resin-based power coating by electrostatic spray process, to a thickness 2.5 mils. Bake finish in a 450 degrees F (metal temperature) oven for 20 minutes. Color shall be black.

2.6 CONCRETE

ASTM C 94, using 3/4 inch maximum size aggregate, and having minimum compressive strength of 3000 psi at 28 days.

2.7 GATE OPERATOR

The gate operator shall be B8B Model XLR, or equal. Salient characteristics are as follows: Operation shall have rack and pinion drive mechanism to open/close gate. Motor shall be 110V, single phase, and shall be able to actuate gates up to 2,000 lbs. at 1.4 fps. Operator housing shall be able to resist a draw load of 1,200 lbs. without deformation.

PART 3 EXECUTION

3.1 INSTALLATION

Fence shall be installed approximately as indicated. The area on either side of the fence line shall be cleared of brush and other obstacles. Installation shall be performed in accordance with manufacturer's instructions.

3.2 EXCAVATION

Post holes shall be excavated as indicated.

3.3 POST INSTALLATION

Posts shall be set plumb and in alignment. Posts shall be set in concrete to the depth indicated on the drawings. Concrete shall be thoroughly consolidated around each post, shall be free of voids and finished to form a dome. Concrete shall be allowed to cure for 72 hours prior to attachment of any item to the posts.

3.4 GATE INSTALLATION

Gates shall be installed at the locations shown. Hinged gate shall be mounted to swing as indicated. Latches, stops, and keepers shall be installed as required. Slide gate shall be installed in accordance with manufacturer's instructions.

3.5 Operator Connections

Contractor shall make all connections between gate operator and existing keypad outside the gate, existing pressure pad inside the gate, and existing controller mounted on gate shack.

3.6 Gate Test

Prior to acceptance by Government, contractor shall test cantilever sliding gate operation using all methods of operation listed in paragraph 3.5. Testing must be performed successfully in the presence of the Government Inspector.

3.7 Cleaning

Clean up debris and unused material, dispose of off Government Property.

3.8 Spare Section

Provide one complete and assembled section of rails and pickets, ready for installation between two posts with typical spacing, to the Government upon completion of work.

-- End of Section --